

Four Day OLR Study (Frozen vs Chilled Samples)

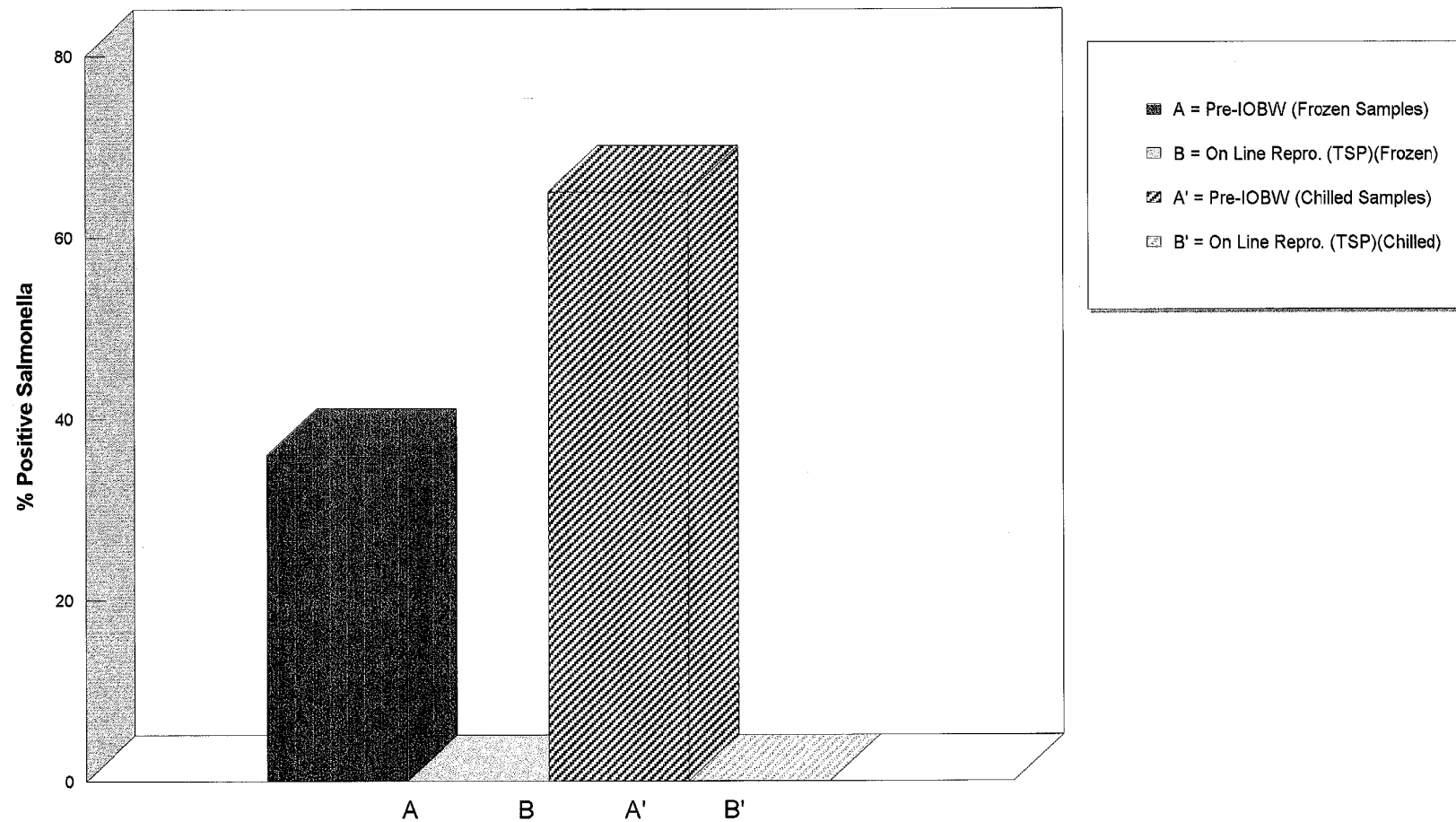
November 1998

*C*rhodia

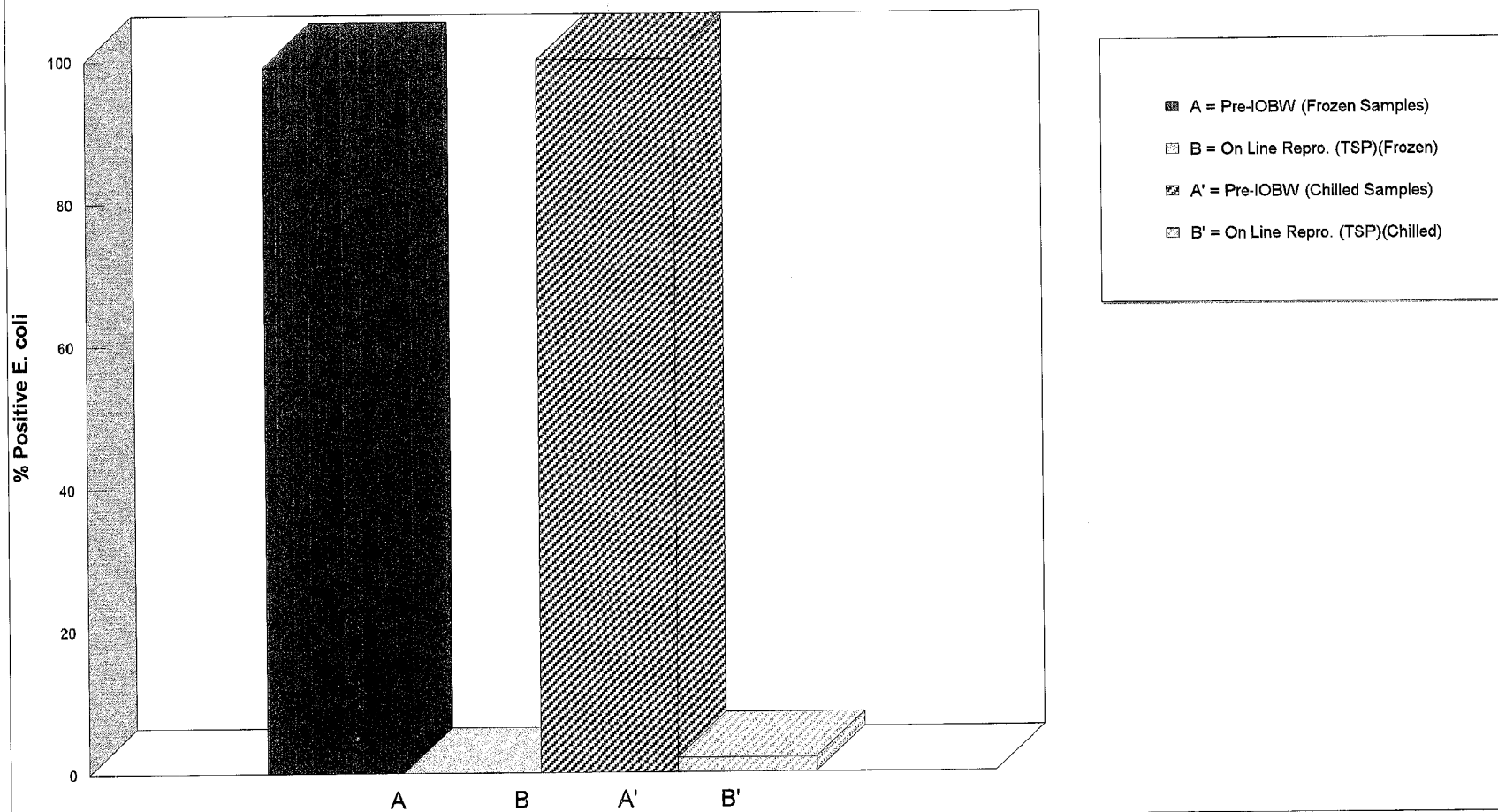
OVERALL SUMMARY OF RESULTS - FOUR DAY "OLR" STUDY AT "ZT" (DAY 1 - 4)
(Frozen vs Chilled Samples)

	# of Samples	APC		Entero		E. coli	Salmonella
Normal Birds (Frozen) Site "A"							
Average Incident Rate	100	35,736 100%	<	1,085 100%	<	892 99%	---- 36%
Normal Birds (Chilled) Site "A' "							
Average Incident Rate	49	79,449 100%		4,298 100%		2,871 100%	---- 65%
On-Line Reprocessed Birds Site "B" (Frozen)							
Average Incident Rate	100	2,417 91%	<	10 0%	<	10 0%	---- 0%
On-Line Reprocessed Birds Site "B' " (Chilled)							
Average Incident Rate	50	6,034 100%	<	13 4%	<	13 2%	---- 0%

OLR TSP TRIAL AT "ZT" (Frozen vs Chilled)
Salmonella Incident rate

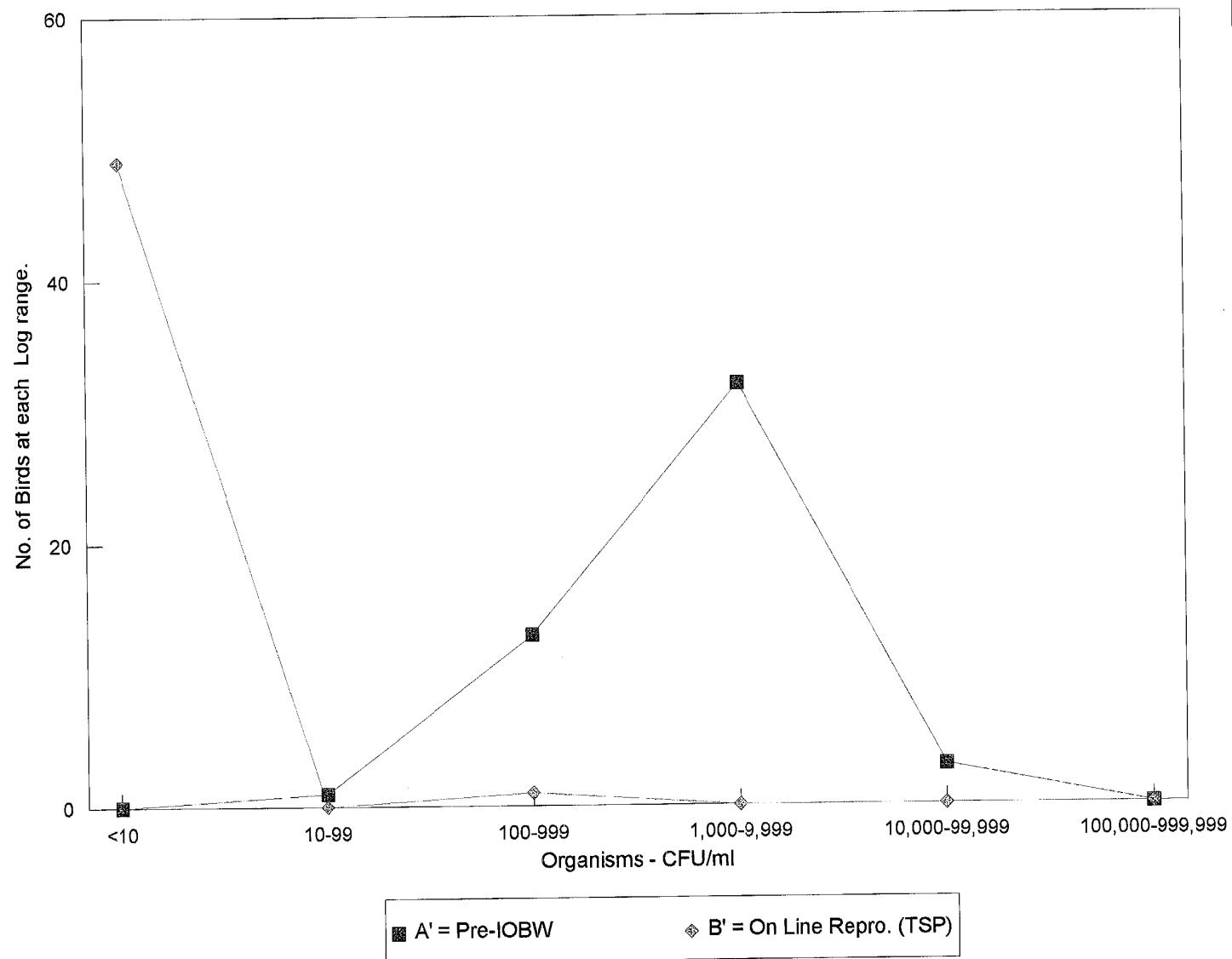


OLR TSP TRIAL AT "ZT" (Frozen vs Chilled)
E. coli Incident rate



OLR TSP Trial at "ZT"

E. coli Data Distribution (Chilled Samples)



On Line Reprocessing (OLR) Trial (Chilled Samples)

E. coli Data Distribution

No. of Birds at each Log range.

	<10	10-99	100-999	1,000-9,999	10,000-99,999	100,000-999,999	Totals
A' = Pre-IOBW (day 1)	*	*	*	*	*	0	0
" " (day 2)	*	*	*	*	*	0	0
" " (day 3)	0	0	9	15	1	0	25
" " (day 4)	0	1	4	17	2	0	24
Totals	0	1	13	32	3	0	49
B' = On Line Repro. (Day1)	*	*	*	*	*	0	0
" " (day2)	*	*	*	*	*	0	0
" " (day3)	25	0	0	0	0	0	25
" " (day4)	24	0	1	0	0	0	25
Totals	49	0	1	0	0	0	50

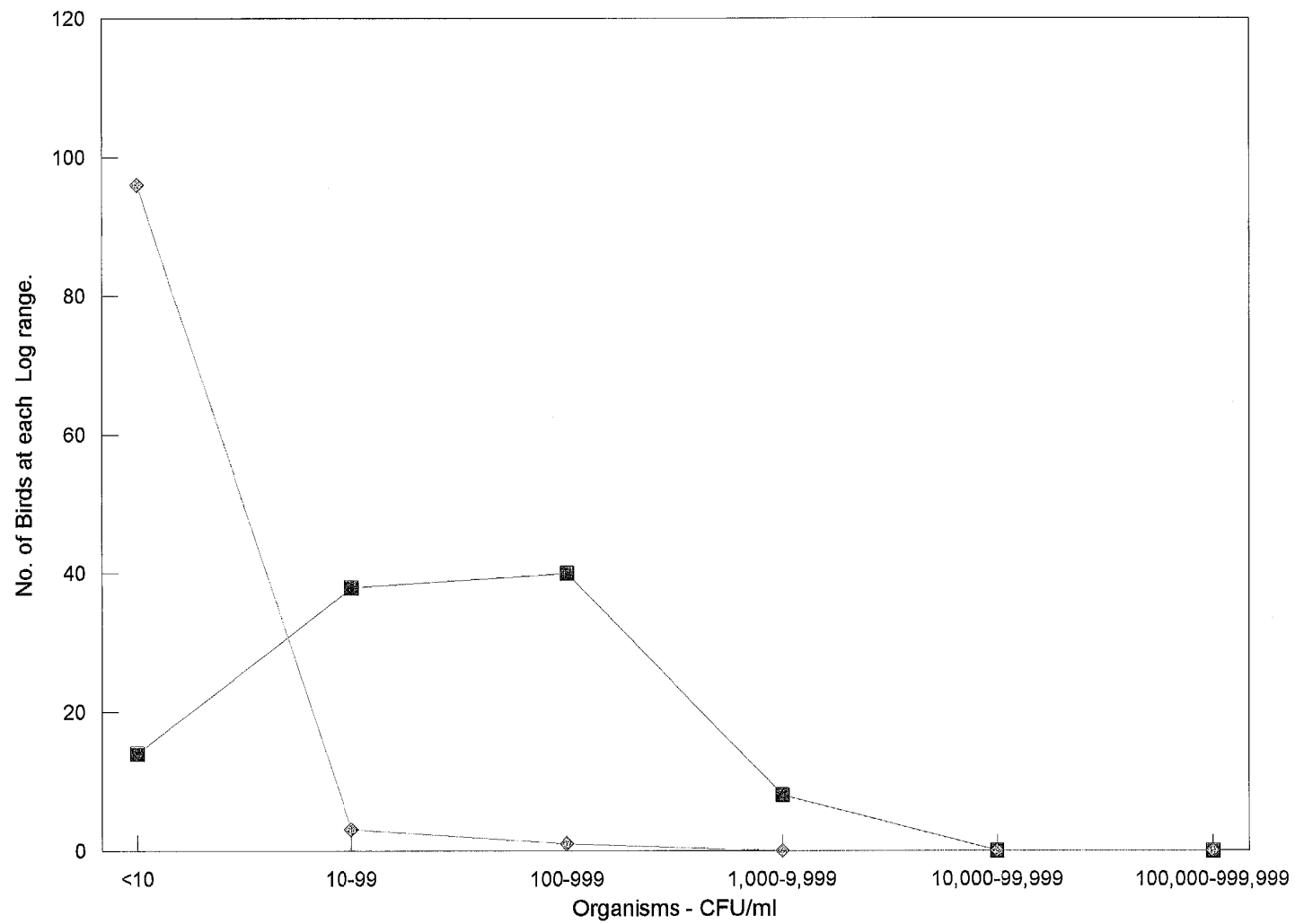
OLR TSP Trial at "ZT"

No. of Birds at each Log range.

E. coli Data Distribution (Chilled Samples)

	<10	10-99	100-999	1,000-9,999	10,000-99,999	100,000-999,999	Totals
A' = Pre-IOBW	0	1	13	32	3	0	49
B' = On Line Repro. (TSP)	49	0	1	0	0	0	50

OLR TSP Trial at "ZT"
E. coli Data Distribution (Frozen Samples)



■ A = Pre-IOBW

◆ B = On Line Repro. (TSP)

On Line Reprocessing (OLR) Trial

No. of Birds at each Log range.

E. coli Data Distribution (Frozen Samples)

	<10	10-99	100-999	1,000-9,999	10,000-99,999	100,000-999,999	Totals
A = Pre-IOBW (day 1)	2	3	16	4	0	0	25
" " (day 2)	6	14	3	2	0	0	25
" " (day 3)	1	12	11	1	0	0	25
" " (day 4)	5	9	10	1	0	0	25
Totals	14	38	40	8	0	0	100
B = On Line Repro. (Day1)	24	0	1	0	0	0	25
" " (day2)	24	1	0	0	0	0	25
" " (day3)	24	1	0	0	0	0	25
" " (day4)	24	1	0	0	0	0	25
Totals	96	3	1	0	0	0	100

OLR TSP Trial at "ZT"

No. of Birds at each Log range.

E. coli Data Distribution (Frozen Samples)

	<10	10-99	100-999	1,000-9,999	10,000-99,999	100,000-999,999	Totals
A = Pre-IOBW	14	38	40	8	0	0	100
B = On Line Repro. (TSP)	96	3	1	0	0	0	100

SUMMARY OF RESULTS OF FOUR DAY "OLR" STUDY AT "ZT" (DAY 1 -4)

Date of Sampling: November 3 - 18, 1998

Microbiology Lab:

Ralston Analytical Lab, St Louis, MO

		# of Samples	APC	Entero	E. coli	Salmonella Gene-Track
Normal Birds (Frozen)						
Site "A"	Day 1	25	27,568	1,256	1,049	24%
	Day 2	25	38,016	610	585	72%
	Day 3	25	35,744	1,076	< 1,210	40%
	Day 4	25	41,616	1,398	726	8%
Average	Site "A"	100	35,736	1,085	< 892	----
Incident Rate	Site "A"		100%	100%	99%	36%

On-Line Reprocessed Birds (Frozen)

Site "B"	Day 1	25	1,028	< 10	< 10	0%
	Day 2	25	< 4,112	< 10	< 10	0%
	Day 3	25	< 2,692	< 10	< 10	0%
	Day 4	25	1,836	< 10	< 10	0%
Average	Site "B"	100	< 2,417	< 10	< 10	----
Incident Rate	Site "B"		91%	0%	0%	0%

Normal Birds (Chilled)

Site "A"	Day 1	*	*	*	*	*
	Day 2	*	*	*	*	*
	Day 3	25	87,840	3,787	2,272	92%
	Day 4	24	70,708	4,830	3,494	38%
Average	Site "A"	49	79,449	4,298	2,871	----
Incident Rate	Site "A"		100%	100%	100%	65%

On-Line Reprocessed Birds (Chilled)

Site "B"	Day 1	*	*	*	*	*
	Day 2	*	*	*	*	*
	Day 3	25	6,704	< 10	< 10	0%
	Day 4	25	5,364	< 16	< 15	0%
Average	Site "B"	50	6,034	< 13	< 13	----
Incident Rate	Site "B"		100%	4%	2%	0%

- Notes:
- a) Avg. Site = Avg. of site, not Avg. of samples.
 - b) Samples detected at the < 10 or <100 level, were averaged as 10 or 100 respectively.
 - c) Frozen samples frozen and covered with dry ice during transit.
 - d) Chilled samples covered with water ice during transit.
 - d) Chilled samples taken only on days 3 and 4.

SUMMARY OF RESULTS - FOUR DAY OLR STUDY AT "ZJ" (DAY 3)
(Chilled Samples)

Date of Sampling: November 17, 1998

Microbiology Lab:

Ralston Analytical Lab, St Louis, MO

Day 3

Normal Birds

Site "A" Line 4

# of Samples	APC	Entero	E. coli	Salmonella Gene-Track
25	87,840	3,787	2,272	92%
Average Site "A"	87,840	3,787	2,272	----
Incident Rate Site "A"	100%	100%	100%	92%

On-Line Reprocessed Birds

Site "B" Line 4

25	6,704	<	10	<	10	0%
Average Site "B"	6,704	<	10	<	10	----
Incident Rate Site "B"	100%		0%		0%	0%

Notes: a) Avg. Site = Avg. of site, not Avg. of samples.

b) Samples detected at the < 10 or <100 level, were averaged as 10 or 100 respectively.

c) Samples were cold upon arrival..

RESULTS OF FOUR DAY "OLR" STUDY AT "AZBM-ZT"

AS REPORTED BY OUTSIDE CONTRACTED LABORATORY #4

TEST CONDUCTED: 17 NOVEMBER, 1998 (DAY 3)

UNRINSED CHILLED SAMPLES OF NORMAL BIRDS FROM SITE "A"

SAMPLE NUMBER	SAMPLE SITE CODE	SPECIMEN NUMBER	AEROBIC PLATE COUNT /GM	ENTEROBACTERIACEAE (VRB-GLUCOSE AGAR) CFU/ML	E. COLI (EC + Mug) CFU/ML	SALMONELLA GENE TRAK
1	A	A-51	260,000	2,600	2,200	POSITIVE
2	A	A-52	110,000	3,900	3,000	POSITIVE
3	A	A-53	190,000	3,200	2,500	POSITIVE
4	A	A-54	64,000	1,400	240	POSITIVE
5	A	A-55	250,000	1,200	800	negative
6	A	A-56	100,000	5,300	3,900	POSITIVE
7	A	A-57	46,000	2,300	2,500	POSITIVE
8	A	A-58	25,000	1,300	510	POSITIVE
9	A	A-59	27,000	1,700	2,100	POSITIVE
10	A	A-60	100,000	7,900	2,900	POSITIVE
11	A	A-61	290,000	3,100	2,400	POSITIVE
12	A	A-62	87,000	4,100	1,000	POSITIVE
13	A	A-63	35,000	8,000	1,100	POSITIVE
14	A	A-64	25,000	740	590	negative
15	A	A-65	46,000	4,700	3,700	POSITIVE
16	A	A-66	58,000	11,000	6,900	POSITIVE
17	A	A-67	16,000	1,200	510	POSITIVE
18	A	A-68	29,000	630	370	POSITIVE
19	A	A-69	39,000	1,900	1,400	POSITIVE
20	A	A-70	27,000	3,300	3,200	POSITIVE
21	A	A-71	12,000	2,200	1,700	POSITIVE
22	A	A-72	150,000	2,000	750	POSITIVE
23	A	A-73	62,000	1,800	860	POSITIVE
24	A	A-74	18,000	1,200	670	POSITIVE
25	A	A-75	130,000	18,000	11,000	POSITIVE
AVERAGE COUNT:			87,840	3,787	2,272	92%

NOTES: SAMPLES SHOWN AS <10 OR <100 ARE AVERAGED AS A 10 OR AS A 100, RESPECTIVELY IN THE AVERAGES SHOWN

TABLE 5

RESULTS OF FOUR DAY "OLR" STUDY AT "AZBM-ZT"

AS REPORTED BY OUTSIDE CONTRACTED LABORATORY #4

TEST CONDUCTED: 17 NOVEMBER, 1998 (DAY 3)

RINSED CHILLED SAMPLES OF ON-LINE REPROCESSED BIRDS TAKEN POST WATER RINSE & IOBW FROM SITE "B"

SAMPLE NUMBER	SAMPLE SITE CODE	SPECIMEN NUMBER	AEROBIC PLATE COUNT /GM	ENTEROBACTERIACEAE (VRB-GLUCOSE AGAR) CFU/ML	E. COLI (EC + Mug) CFU/ML	SALMONELLA GENE TRAK
1	CR	B-51	1,500	< 10	< 10	negative
2	CR	B-52	900	< 10	< 10	negative
3	CR	B-53	900	< 10	< 10	negative
4	CR	B-54	46,000	< 10	< 10	negative
5	CR	B-55	1,000	< 10	< 10	negative
6	CR	B-56	66,000	< 10	< 10	negative
7	CR	B-57	5,500	< 10	< 10	negative
8	CR	B-58	1,300	< 10	< 10	negative
9	CR	B-59	600	< 10	< 10	negative
10	CR	B-60	2,800	< 10	< 10	negative
11	CR	B-61	900	< 10	< 10	negative
12	CR	B-62	1,700	< 10	< 10	negative
13	CR	B-63	1,000	< 10	< 10	negative
14	CR	B-64	1,600	< 10	< 10	negative
15	CR	B-65	1,800	< 10	< 10	negative
16	CR	B-66	4,800	< 10	< 10	negative
17	CR	B-67	11,000	< 10	< 10	negative
18	CR	B-68	300	< 10	< 10	negative
19	CR	B-69	2,000	< 10	< 10	negative
20	CR	B-70	600	< 10	< 10	negative
21	CR	B-71	4,500	< 10	< 10	negative
22	CR	B-72	1,100	< 10	< 10	negative
23	CR	B-73	1,200	< 10	< 10	negative
24	CR	B-74	2,700	< 10	< 10	negative
25	CR	B-75	5,900	< 10	< 10	negative
AVERAGE COUNT:			6,704	< 10	< 10	0%

NOTES: SAMPLES SHOWN AS <10 OR <100 ARE AVERAGED AS A 10 OR AS A 100, RESPECTIVELY IN THE AVERAGES SHOWN

TABLE 6

SUMMARY OF RESULTS - FOUR DAY OLR STUDY AT "ZT" (DAY 4)
(Chilled Samples)

Date of Sampling: November 18, 1998

Microbiology Lab:

Ralston Analytical Lab, St Louis, MO

Day 4

Normal Birds

Site "A"

# of Samples	APC	Entero	E. coli	Salmonella Gene-Track
24	70,708	4,830	3,494	38%
Average Site "A"	70,708	4,830	3,494	----
Incident Rate Site "A"	100%	100%	100%	38%

On-Line Reprocessed Birds

Site "B"

Average

Site "B"

Incident Rate

Site "B"

25	5,364	<	16	<	15	0%
25	5,364	<	16	<	15	----
	100%		8%		4%	0%

Notes: a) Avg. Site = Avg. of site, not Avg. of samples.

b) Samples detected at the < 10 or <100 level, were averaged as 10 or 100 respectively.

c) Samples were cold upon arrival.

RESULTS OF FOUR DAY "OLR" STUDY AT "AZBM-ZT"

AS REPORTED BY OUTSIDE CONTRACTED LABORATORY #4

TEST CONDUCTED: 18 NOVEMBER, 1998 (DAY 4)

UNRINSED CHILLED SAMPLES OF NORMAL BIRDS FROM SITE "A"

SAMPLE NUMBER	SAMPLE SITE CODE	SPECIMEN NUMBER	AEROBIC PLATE COUNT /GM	ENTEROBACTERIACEAE (VRB-GLUCOSE AGAR) CFU/ML	E. COLI (EC + Mug) CFU/ML	SALMONELLA GENE TRAK
1	A	A-76	47,000	1,000	590	POSITIVE
2	A	A-77	670,000	28,000	19,000	POSITIVE
3	A	A-78	67,000	7,300	3,300	POSITIVE
4	A	A-79	20,000	780	190	negative
5	A	A-80	29,000	1,300	1,100	negative
6	A	A-81	26,000	2,200	1,500	negative
7	A	A-82	14,000	1,300	1,100	negative
8	A	A-83	24,000	3,000	2,600	negative
9	A	A-84	32,000	12,000	10,000	POSITIVE
10	A	A-85	24,000	2,800	2,500	POSITIVE
11	A	* A-86	*	*	*	*
12	A	A-87	110,000	5,900	2,400	negative
13	A	A-88	18,000	1,000	630	negative
14	A	A-89	22,000	3,500	3,800	POSITIVE
15	A	A-90	35,000	2,100	2,200	negative
16	A	A-91	46,000	3,100	2,400	negative
17	A	A-92	42,000	4,000	4,000	negative
18	A	A-93	62,000	9,800	8,300	negative
19	A	A-94	53,000	6,500	5,200	negative
20	A	A-95	110,000	3,900	3,100	negative
21	A	A-96	140,000	6,300	3,100	POSITIVE
22	A	A-97	58,000	4,600	2,500	negative
23	A	A-98	12,000	570	270	negative
24	A	A-99	12,000	680	85	POSITIVE
25	A	A-100	24000	4,300	4,000	POSITIVE
AVERAGE COUNT:			70,708	4,830	3,494	38%

NOTES: SAMPLES SHOWN AS <10 OR <100 ARE AVERAGED AS A 10 OR AS A 100, RESPECTIVELY IN THE AVERAGES SHOWN

* Sample A-86 was missing from the sample set.

TABLE 7